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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/796,704

03/09/2004

Toru Takayama

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23552

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02/28/2006

MERCHANT & GOULD PC

P.O. BOX 2903

MINNEAPOLIS, MN 55402-0903

EXAMINER

FLORES RUIZ, DELMA R

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 02/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/796,704

Applicant(s)

TAKAYAMA, TORU

Examiner

Delma R. Flores Ruiz

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-14 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 03/09/2004.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 10/796,704, filed on 03/09/2004. Applicant is advised of possible benefits under 35 U.S.C. 119(a)-(d), wherein an application for patent filed in the United States may be entitled to the benefit of the filing date of a prior application filed in a foreign country.

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 03/09/2004 have been considered by the examiner.

### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

Figure 16 and 17, character 57.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

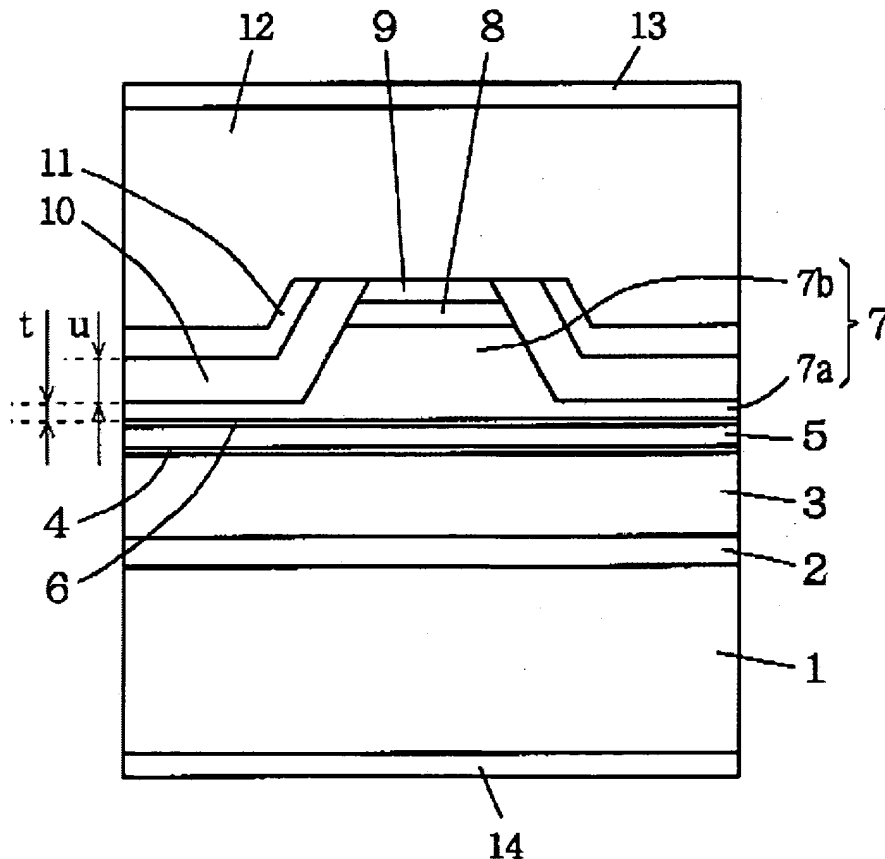
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 5, and 8 – 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiroyama et al. (5,963,572).

***Regarding claim 1***, Hiroyama discloses in Figure 1 and 8, a semiconductor laser device formed on a tilted substrate (1, Column 8, Lines 50 – 55) composed of a



**Regarding claim 2**, Hiroyama discloses in Figures 1 and 8, the width of the bottom portion of the ridge in the second region (7b) is increased with distance from the first region (see Fig. 1, Character 7a).

**Regarding claim 3**, Hiroyama discloses in Figures 1 and 8, the second region (7b) is placed between the first region (7a) and one end face in the optical path, and between the first region (7a) and the other end face in the optical path (Figure 1 and 8).

**Regarding claims 4 and 5**, Hiroyama discloses in Figures 1 and 8, the width of the bottom portion of the ridge in the first region (7a) and second region (7b) is in a range of 1.8  $\mu\text{m}$  to 3  $\mu\text{m}$  (Column 9, Lines 16 – 18).

**Regarding claim 8**, Hiroyama discloses in Figures 1 and 8, the active layer (5) is formed of a quantum well structure (Column 8, Lines 66 – 67 and Column 9, Lines 1 – 5).

**Regarding claim 9**, Hiroyama discloses Figures 1 and 8, the active layer (5) in a vicinity of the end face in the optical path is disordered by diffusion of impurities (Column 11, Lines 55 – 65).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10 – 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Doi et al (5,679,947).

***Regarding claim 10***, Doi discloses in Figure 6 and 7A-12C, an optical pickup apparatus (Abstract), comprising a semiconductor laser (see Fig. 6, Character 8) device and a light-receiving portion (see Fig. 6, Character 4) for receiving light output from the semiconductor laser device (see Fig. 6, Character 8) and reflected (see Fig. 6, Character 7) from a recording medium (see Fig. 6, Character 2), wherein the semiconductor laser device (see Fig. 6, Character 8 or see Fig. 7A – 12C) is formed on a tilted substrate (see Fig. 6, Character 9, Column 6, Lines 26 – 28) composed of a compound semiconductor, and includes an active layer (see Fig. 12C, Character 23) and two cladding layers (see Fig. 12C Characters 22 and 24) interposing the active layer (see Fig. 12C Character 23) therebetween, one of the cladding layers forms a mesa-shaped ridge (see Fig. 12C, Character 24), the ridge includes a first region where

a width of a bottom portion of the ridge is substantially constant, and a second region where the width of the bottom portion of the ridge is varied continuously, and the second region is placed between the first region and an end face in an optical path.

**Regarding claim 11**, Doi discloses in Figure 6, a light-splitting portion for splitting the reflected light, wherein the light-receiving portion receives the reflected light split by the light-splitting portion (Column 11, Lines 30 – 36 and Column 12, Lines 1 – 12).

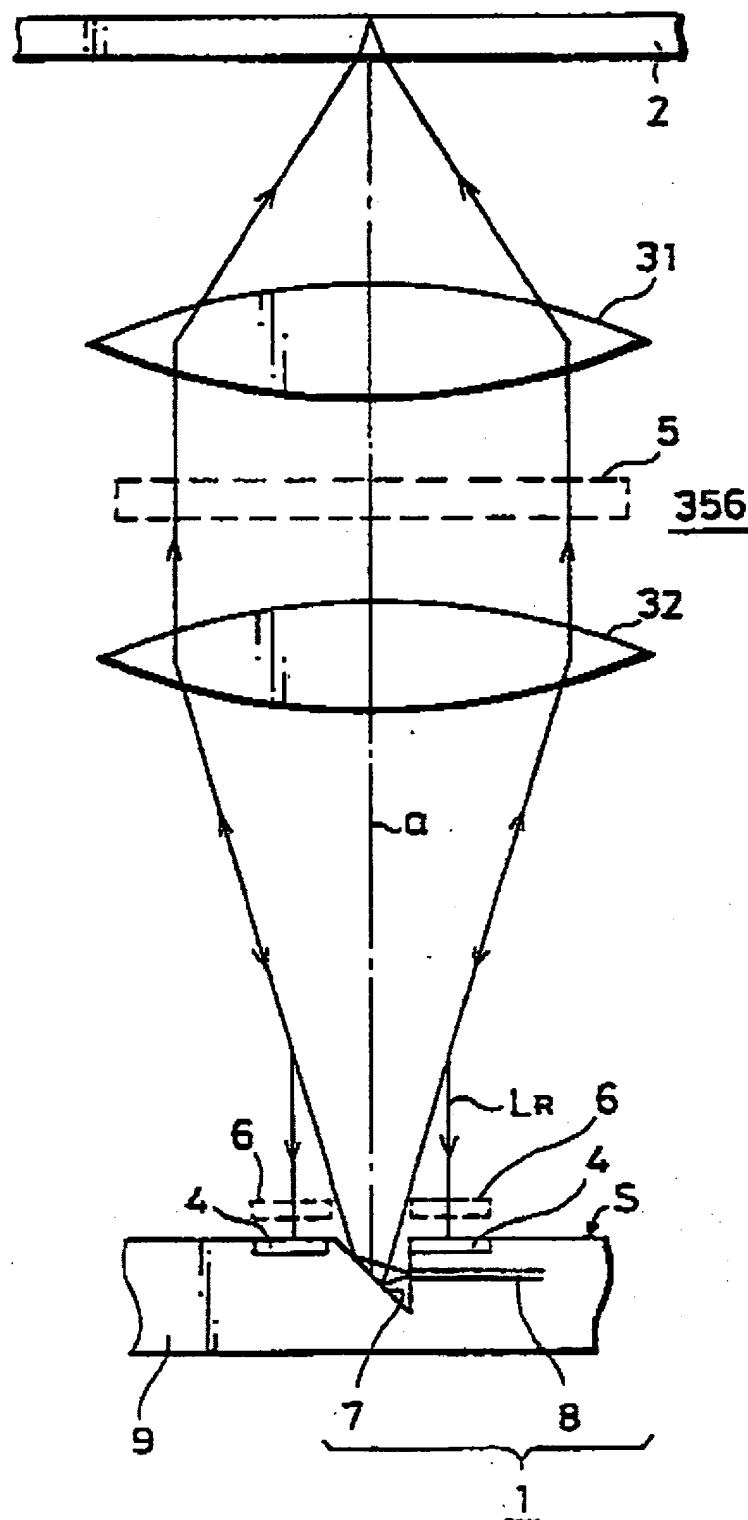
**Regarding claim 12**, Doi discloses in Figure 6, the semiconductor laser (see Fig. 6, Character 8) device and the light-receiving portion (see Fig. 6, Character 4) are formed on the same substrate (see Fig. 6, Character 9).

**Regarding claim 13**, Doi discloses in Figure 6, an optical element (see Fig. 6, Character 7), wherein the optical element reflects light output from the semiconductor laser device (see Fig. 6, Character 8) in a direction normal to a principal plane of the substrate (see Fig. 6, Character 9).

**Regarding claim 14**, Doi discloses in Figure 6, the optical element is a reflection mirror (see Fig. 6, Character 7).



**FIG. 6**



***Allowable Subject Matter***

Claims 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delma R. Flores Ruiz whose telephone number is (571) 272-1940. The examiner can normally be reached on M - F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Sun Harvey can be reached on (571) -272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



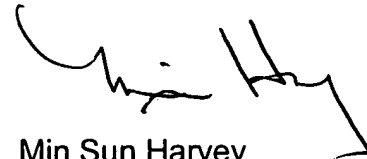
Delma R. Flores Ruiz

Examiner

Art Unit 2828

DRFR/MH

February 9, 2006



Min Sun Harvey  
Supervisor Patent Examiner  
Art Unit 2828

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